

# Comparisons of Job Characteristics

Focus Occupation: **Geographers (19-3092)**

Associated Occupation: **Hydrologists (19-2043)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

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<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 40

Focus Occupation: Geographers (19-3092)

Associated Occupation: Hydrologists (19-2043)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematics	9.2	17.7	12.5	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	17.4	3.4	<<	Extensive education and/or training may be required
Geography	3.9	16.7	24.8	>>	Current knowledge level is likely more than sufficient
Physics	4.3	15.7	5.0	<<	Extensive education and/or training may be required
Chemistry	4.8	15.6	4.8	<<	Extensive education and/or training may be required
Biology	3.7	13.6	8.9	<<	Extensive education and/or training may be required
Design	5.2	12.6	5.8	<<	Extensive education and/or training may be required
Law and Government	5.9	11.3	9.0	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 88

Focus Occupation: Geographers (19-3092)

Associated Occupation: Hydrologists (19-2043)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Critical Thinking	10.8	14.5	12.9	<	A higher skill level may be required
Science	4.5	13.0	13.8	0	Current skill level may be sufficient

Mathematics	6.2	12.8	9.6	<<	Extensive development of skills in this area may be required
Programming	2.2	6.5	2.3	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 96			
Focus Occupation: Geographers (19-3092)					
Associated Occupation: Hydrologists (19-2043)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Inductive Reasoning	10.2	14.6	13.5	0	Current ability level may be sufficient
Written Comprehension	11.0	14.6	14.4	0	Current ability level may be sufficient
Written Expression	9.8	14.1	15.2	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	12.0	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	13.8	10.6	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	13.4	12.8	0	Current ability level may be sufficient
Flexibility of Closure	7.8	12.0	9.7	<	Some improvement in abilities may be required
Originality	7.6	11.5	9.7	<	Some improvement in abilities may be required
Fluency of Ideas	7.6	11.3	9.7	<	Some improvement in abilities may be required
Category Flexibility	9.0	11.2	12.8	>	Current ability level is likely sufficient
Number Facility	6.3	10.8	10.6	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 95
Focus Occupation: Geographers (19-3092) Associated Occupation: Hydrologists (19-2043)		
Work Activities	Exclusivity of Activity	
Advise clients or customers	19	
Advise governmental or industrial personnel	28	
Analyze ecosystem data	69	
Analyze geological research data	87	
Analyze scientific research data or investigative findings	27	
Classify plants, animals, or other natural phenomena	69	
Collect geographic or physical data	81	

Collect scientific or technical data	30
Collect statistical data	47
Communicate technical information	4
Conduct field research or investigative studies	52
Confer with research personnel	50
Confer with scientists	54
Develop or maintain databases	30
Develop policies, procedures, methods, or standards	21
Develop scientific or mathematical hypotheses, theories, or laws	62
Develop tables depicting data	33
Direct and coordinate scientific research or investigative studies	27
Draw maps or charts	69
Explain complex mathematical information	30
Interpret aerial photographs	69
Maintain records, reports, or files	5
Make decisions	24
Make presentations	13
Observe weather conditions	95
Perform statistical analysis in physical science or geological research	71
Plan scientific research or investigative studies	48
Prepare environmental impact or related environmental reports	81
Prepare reports	8
Prepare technical reports or related documentation	22
Present research papers or dissertations on physical science issues	78
Read maps	42
Recommend further study or action based on research data	60
Use computers to enter, access or retrieve data	3
Use geographic positioning system (GPS)	81
Use geographical information system (GIS) software	72
Use knowledge of investigation techniques	16
Use library or online Internet research techniques	21
Use mathematical or statistical methods to identify or analyze problems	30
Use measuring instruments to collect geological data	89
Use physical science research techniques	68
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17
Write research or project grant proposals	33
Write scholarly or technical research papers	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 82

**Focus Occupation: Geographers (19-3092)**  
**Associated Occupation: Hydrologists (19-2043)**

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Cameras	2
Chemical evaluation instruments and supplies	10
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Electrochemical measuring instruments and accessories	9
Hydrological instruments	31
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory ovens and accessories	15
Laboratory sieves and sifting equipment and supplies	27
Land surveying instruments	19
Length and thickness and distance measuring instruments	2
Measuring and layout tools	3
Network applications software	1
Pipettes and liquid handling equipment and supplies	16
Radar and sonar systems and components	24
Sampling equipment	12
Seismological instruments	56
Soil measuring equipment	20
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Water treatment and supply equipment	21
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.